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In re Application of: Shu Lin

Serial No.: 10/078,877

Confirmation No.: 6310

Filed: February 19, 2002

For: **SEARCHING FOR FRAMES TO PERFORM A TRICK MODE**

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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Group Art Unit: 2623

Examiner: James R. Sheleheda

**CERTIFICATE OF MAILING**  
**37 CFR 1.8**

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2-19-08  
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Fideliz Romero  
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Dear Sir:

Appellant submits this Appeal Brief to the Board of Patent Appeals and Interferences on appeal from the decision of the Examiner of Group Art Unit 2623 dated September 27, 2007, rejecting claims 1-19.

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**Real Party in Interest**

The real party in interest is Thomson Licensing.

### **Related Appeals and Interferences**

Appellant asserts that no other appeals or interferences are known to the Appellant, the Appellant's legal representative, or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

### **Status of Claims**

Claims 1-19 were originally presented with the filed application. The Appellant's claims 8 and 18 were amended in prosecution to correct for informalities. All other claims remain unamended. Claims 1-19 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Keller et al. (US Patent No. 7,023,924, hereinafter "Keller"). In addition, the Appellant's Claims 1, 2, 11 and 12 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Krause et al. (US Patent No. 5,949,948, hereinafter "Krause"). The Examiner's rejection of claims 1-19 and 1, 2, 11 and 12 is herein being appealed. That is, the claims on appeal are those presented in the Appellant's response filed on August 24, 2006, which are the same as in the Appellant's response filed on January 02, 2007. More specifically, the claims on appeal are the Appellant's claims 1-19, which are listed in the attached Claims Appendix.

### **Status of Amendments**

A first response was filed on August 24, 2006 to overcome a First Office Action dated May 26, 2006. In the First Office Action, the Examiner rejected the Appellant's claims 1-19 under 35 U.S.C. § 102(e) as being anticipated by Fujinama (US Patent No. 5,502,573). In the response filed on August 24, 2006, the Appellant amended claims 8 and 18 to correct for informalities and set forth arguments traversing the rejections issued by the Examiner and distinguishing the Appellant's invention over the cited prior art.

A second response was filed on January 02, 2007 to overcome a Final Office Action dated September 29, 2006. In the Final Office Action, the Examiner again rejected the Appellant's claims 1-19 under 35 U.S.C. § 102(e) as being anticipated by Fujinama. In the response filed on January 02, 2007, the Appellant set forth further arguments traversing the rejections issued by the Examiner and distinguishing the Appellant's invention over the cited prior art.

The Examiner responded to the Appellant's response of January 02, 2007 with an Advisory Action dated January 22, 2007. In the Advisory Action, the Examiner indicated that the response dated January 02, 2007 does NOT place the application in condition for allowance because all arguments fail to be persuasive. In response to the Advisory Action dated January 22, 2007, the Appellant submitted a Notice of Appeal dated February 06, 2007. The Appellant subsequently submitted an Appeal Brief on June 08, 2007.

The Examiner responded to the Appellant's Appeal Brief dated June 08, 2007 by reopening prosecution and submitting an Office Action dated September 27, 2007. In the Office Action, the Examiner rejected the Appellant's claims 1-19 under 35 U.S.C. § 102(e) as being anticipated by Keller et al. (US Patent No. 7,023,924). In addition, the Appellant's Claims 1, 2, 11 and 12 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Krause et al. (US Patent No. 5,949,948, hereinafter "Krause").

In response to the Examiner's Office Action dated September 27, 2007, the Appellant submitted a Notice of Appeal dated December 27, 2007 under 37 CFR 41.31.

### **Summary of Claimed Subject Matter**

The invention of the Appellant provides a method and system for performing a trick mode on a video signal containing a plurality of original pictures. The Appellant teaches that in one embodiment, a method for performing a trick mode on a video signal containing a plurality of original pictures includes the steps of: receiving a trick mode command; searching for a picture in the video signal compatible with the trick mode; and initiating the trick mode once the compatible picture is located. The Appellant further teaches that in one arrangement, the compatible picture can be an intra picture or a predictive picture. In addition, it is taught that in one embodiment of the Appellant's invention the trick mode can be a freeze trick mode, and the method can further include the step of repeating the compatible picture for the duration of the trick mode to form a trick mode signal. Each of the plurality of original pictures can contain a display indicator, and the method can further include the step of selectively modifying the display indicator of the original pictures that follow the compatible picture when the compatible picture is repeated. In addition, the repeating step can further include the step of repeating the compatible picture for the duration of the trick mode by inserting into the video signal dummy pictures predicted from the compatible picture to form the trick mode video signal. The Appellant teaches that the method can also include the step of selectively modifying the display indicator of the original pictures that follow the compatible picture when a dummy picture is inserted into the video signal. The dummy pictures can be dummy predictive pictures. Further, the compatible picture can be an intra picture, and the method can further include the step of selectively inserting the compatible intra picture into the trick mode signal.

The Appellant further teaches that in an alternate embodiment a system for performing a trick mode on a video signal includes: a controller for reading data from a storage medium and generating the video signal; and a video processor in which the processor is programmed to: receive a trick mode command; search for a picture in the video signal compatible with the trick mode; and initiate the trick mode once the

compatible picture is located. The system also includes suitable software and circuitry to implement the method as described above.

As suggested in MPEP 1206, the Appellant now reads at least two of the broadest appealed claims on the specification and on the drawings. It should be understood, however, that the appealed claims may read on other portions of the specification or other figures that are not listed below.

The Appellant's Specification specifically refers to FIG. 1 for teaching a system for implementing the various advanced operating features in accordance with the inventive arrangements. The Appellant teaches that the system can include a controller for reading data from and writing data to a storage medium. The system can also have a searching engine, a microprocessor and a display device. The Appellant teaches that the searching engine can contain suitable software and circuitry for locating one or more particular types of pictures in a video signal read from the storage medium. Control and data interfaces are also provided for permitting the microprocessor to control the operation of the controller and the searching engine. The Appellant further teaches that suitable software or firmware can be provided in memory for the conventional operations performed by the microprocessor and that program routines can be provided for the microprocessor in accordance with the inventive arrangements.

It should be understood that all or portions of the searching engine and the microprocessor can be a video processor within contemplation of the Appellant's invention. Further, all or portions of the controller, the searching engine and the microprocessor can be a bitstream source. The Appellant teaches that in one arrangement, the display device can contain its own decoder for decoding all or a portion of any video signal read from the storage medium and processed by the bitstream source. In this particular arrangement, the decoder in the bitstream source typically does not decode the video signal read from the storage medium. This particular embodiment can be referred to as a remote decoder arrangement, and the decoder in the display device can be referred to as a remote decoder. The Appellant notes, however, that the invention is not limited to this arrangement, as the invention can be practiced in other suitable systems.



In operation, the controller can read a video signal containing a plurality of digitally encoded pictures from the storage medium. These pictures can be referred to as original pictures. In one arrangement, if the microprocessor receives a trick mode command, then the microprocessor can signal the searching engine to begin searching for a picture in the video signal compatible with the trick mode. Once a compatible picture is located, the microprocessor can initiate the trick mode. A compatible picture can be an I picture, a P picture or any other picture that can be used to predict other pictures in a video signal. The Appellant teaches that in one arrangement, the trick mode can be a freeze or pause trick mode. In accordance with the freeze trick mode command, the microprocessor can repeat the compatible picture for the duration of the freeze trick mode to form a trick mode video signal. Additionally, the microprocessor can repeat the compatible picture by inserting into the video signal dummy pictures predicted from the compatible picture to form the trick mode video signal.

In another arrangement, if the searching engine locates a particular compatible picture, the microprocessor can selectively insert this compatible picture into the trick mode video signal. Moreover, following the cessation of the freeze trick mode, the microprocessor can modify certain portions of information contained within one or more of the original pictures that follow the compatible picture to reflect an intended display order. This modification step can be performed whether the compatible picture is repeated or dummy pictures are inserted in the video signal.

With reference to FIG. 2, the Appellant teaches an embodiment of a method for performing a trick mode on a video signal containing a plurality of original pictures. More specifically, the Appellant teaches that at step 210, a video signal containing a plurality of original pictures can be read. At step 212, a trick mode command can be received. In one arrangement, the trick mode command can be a freeze or pause trick mode command. The Appellant teaches that for purposes of the invention, a freeze trick mode can be a trick mode in which a particular picture in the video signal can be repeatedly displayed on a display device for an amount of time determined by a viewer. Once the trick mode command is received, at step 214, a search of the plurality of

original pictures can be conducted to locate a picture compatible with the trick mode. As shown at step 216, the trick mode can be initiated after the compatible picture is located.

The Appellant teaches that as previously mentioned, a compatible picture is a picture in the video signal that can be used to predict other pictures in the video signal. The compatible picture can be repeatedly displayed for the duration of the freeze trick mode to form a freeze trick mode video signal. The Appellant teaches that in one embodiment of the invention, the compatible picture can be an I picture or a P picture, however, that the invention is not limited in this regard, as any other suitable picture can be a compatible picture. By delaying the initiation of the freeze trick mode until a compatible picture is located, such as an I or P picture, it is unnecessary to transmit to a decoder a reference or anchor frame that follows the compatible picture to construct the compatible picture prior to the compatible picture being repeated.

At step 218, the repeating the compatible picture step can be performed by inserting into the video signal one or more dummy pictures predicted from the compatible picture to form the freeze trick mode video signal. The dummy pictures can be repeats or duplicates (once they are decoded) of the compatible picture, which can permit the freeze trick mode to be performed. The Appellant teaches that a dummy picture is a picture that can be predicted from certain pictures and whose motion vectors and discrete cosine transform (DCT) coefficients are set to zero (or not encoded). As such, a dummy picture contains very little information. A dummy picture's primary purpose is to duplicate or repeat the picture from which it was predicted using very few bits. Thus, a dummy picture is suitable for replacing the repeated compatible picture when the compatible picture is to be repeated during the freeze trick mode video signal. The dummy pictures can be transmitted to a remote decoder rather than repeatedly transmitting the compatible picture. The Appellant teaches that this insertion and replacement step may be helpful in keeping a bit rate of the freeze trick mode video signal at a manageable level. Without inserting dummy pictures, repeating the compatible picture may cause the freeze trick mode video signal to exceed a bit rate limit of a transmission channel between a digital video recorder or

player and a DTV, particularly if the compatible picture is an I picture or even a P picture. In one arrangement, the dummy pictures can be dummy P pictures. Compared to conventional P pictures, the dummy P pictures contain little encoded information and are suitable for repeating a compatible picture.

The Appellant then teaches that at decision block 220, it can be determined whether the compatible picture is an I picture. If the compatible picture is an I picture, at decision block 222, the option of selectively inserting the compatible I picture into the trick mode video signal can be selected and performed at step 224. Occasionally or selectively inserting the compatible picture into the trick mode video signal if it is an I picture can be done merely by repeating the compatible I picture and inserting the compatible I picture among the dummy P pictures in the trick mode video signal. Such a process can enable a decoder, particularly a remote decoder, to continue the decoding of the trick mode video signal if a viewer changes the channel broadcasting the signal and then switches back to this channel. In addition, if the viewer turns off the display device during the freeze trick mode, the insertion of the I pictures permits the decoder to begin decoding the trick mode signal again if the viewer turns the device back on.

The Appellant teaches that at decision block 226, it can be determined whether the freeze trick mode is to continue. If yes, the flowchart 200 can continue at step 218. If the freeze trick mode is stopped, then the flowchart 200 can continue to decision block 228. In one arrangement, each of the plurality of original pictures in the video signal can contain a display indicator. A display indicator can instruct certain decoders as to when a particular picture will be displayed relative to a number of other pictures in a video signal. At decision block 228, it can be determined whether certain display indicators are to be selectively modified. If yes, then in one arrangement, the display indicators of original pictures that follow the compatible picture can be selectively modified, as shown at step 230. The Appellant notes that modifying these display indicators can reflect an intended display order of the plurality of original pictures if dummy P pictures are inserted in the video signal and that such modification can also occur if compatible I pictures are selectively inserted into the trick mode video signal. If

the display indicators are not to be modified, then the flowchart 200 can stop at step 232.

For the convenience of the Board of Patent Appeals and Interferences, Appellant's pending claims are presented below in claim format with elements read on the drawings and appropriate citations to at least one portion of the specification for each element of the appealed claims (with reference numerals added).

Claim 1 positively recites (with reference numerals added, where applicable):

1. A method (200) of performing a trick mode on a video signal containing a plurality of original pictures, comprising the steps of:  
receiving (212) a trick mode command;  
searching (214) the plurality of original pictures in the video signal for a picture compatible with the trick mode; and  
initiating (216) the trick mode once the compatible picture is located.  
(See Appellant's specification, page 9, line 9 through page 10, line 8).

Claim 2 positively recites:

2. The method according to claim 1, wherein the compatible picture is an intra picture. (See Appellant's specification, page 4, lines 4-5 and page 10, lines 12-18).

Claim 3 positively recites:

3. The method according to claim 1, wherein the compatible picture is a predictive picture. (See Appellant's specification, page 4, lines 4-5 and page 10, lines 12-18).

Claim 4 positively recites:

4. The method according to claim 1, wherein the trick mode is a freeze trick mode and said method further comprises the step of repeating the compatible picture for the duration of the trick mode to form a trick mode signal. (See Appellant's specification, page 4, lines 6-9 and page 8, lines 17-22 and page 10, lines 10-12).

Claim 5 positively recites:

5. The method according to claim 4, wherein said repeating step further comprises the step of repeating the compatible picture for the duration of the trick mode by inserting into the video signal dummy pictures predicted from the compatible picture to form the trick mode video signal.  
(See Appellant's specification, page 4, lines 13-16 and page 8, lines 17-22 and page 10, lines 19-21).

Claim 6 positively recites:

6. The method according to claim 5, wherein each of the plurality of original pictures contains a display indicator and said method further comprises the step of selectively modifying the display indicator of the original pictures that follow the compatible picture when a dummy picture is inserted into the video signal. (See Appellant's specification, page 4, lines 9-12 and page 12, line 23 through page 13, line 10).

Claim 7 positively recites:

7. The method according to claim 6, wherein the dummy pictures are dummy predictive pictures. (See Appellant's specification, page 4, lines 18-19).

Claim 8 positively recites:

8. The method according to claim 7, wherein the compatible picture is an intra (I) picture and said method further comprises the step of selectively inserting the compatible I picture into the trick mode signal. (See Appellant's specification, page 4, lines 5-6 and page 8, lines 15-16 and page 10, lines 12-13).

Claim 9 positively recites:

9. The method according to claim 8, wherein at least a portion of the trick mode is decoded by a remote decoder. (See Appellant's specification, page 4, lines 21-22, and page 9, lines 10-18).

Claim 10 positively recites:

10. A method (200) of performing a trick mode on a video signal, comprising the steps of:  
receiving (212) a trick mode command;  
searching (214) for a picture in the video signal compatible with the trick mode; and  
initiating (216) the trick mode once the compatible picture is located;  
wherein the trick mode command is a freeze trick mode.  
(See Appellant's specification, page 9, line 9 through page 10, line 8).

Claim 11 positively recites (with reference numerals added, where applicable):

11. A system (100) for performing a trick mode on a video signal containing a plurality of original pictures, comprising:  
a controller (110) for reading data from a storage medium (112) and generating the video signal; and  
a video processor (120), wherein the processor is programmed to:  
receive (212) a trick mode command;  
search (214) the plurality of original pictures for a picture in the video signal compatible with the trick mode; and  
initiate (216) the trick mode once the compatible picture is located. (See Appellant's specification, page 7, line 2 through page 9, line 7).

Claim 12 positively recites:

12. The system according to claim 11, wherein the compatible picture is an intra picture. (See Appellant's specification, page 4, lines 4-5 and page 10, lines 12-18).

Claim 13 positively recites:

13. The system according to claim 11, wherein the compatible picture is a predictive picture. (See Appellant's specification, page 4, lines 4-5 and page 10, lines 12-18).



Claim 14 positively recites:

14. The system according to claim 11, wherein the trick mode is a freeze trick mode and the processor is further programmed to repeat the compatible picture for the duration of the trick mode to form a trick mode signal. (See Appellant's specification, page 4, lines 6-9 and page 8, lines 17-22 and page 10, lines 10-12).

Claim 15 positively recites:

15. The system according to claim 14, wherein the processor is further programmed to repeat the compatible picture for the duration of the trick mode by inserting into the video signal dummy pictures predicted from the compatible picture to form the trick mode video signal. (See Appellant's specification, page 4, lines 13-16 and page 8, lines 17-22 and page 10, lines 19-21).

Claim 16 positively recites:

16. The system according to claim 15, wherein each of the plurality of original pictures contains a display indicator and the processor is further programmed to selectively modify the display indicator of the original pictures that follow the compatible picture when a dummy picture is inserted into the video signal. (See Appellant's specification, page 4, lines 9-12 and page 12, line 23 through page 13, line 10).

Claim 17 positively recites:

17. The system according to claim 16, wherein the dummy pictures are dummy predictive pictures. (See Appellant's specification, page 4, lines 18-19).

Claim 18 positively recites:

18. The system according to claim 17, wherein the compatible picture is an intra (I) picture and the processor is further programmed to selectively insert the compatible I picture into the trick mode signal. (See Appellant's specification, page 4, lines 5-6 and page 8, lines 15-16 and page 10, lines 12-13).

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Claim 19 positively recites:

19. The system according to claim 18, further comprising a remote decoder for decoding at least a portion of the trick mode video signal. (See Appellant's specification, page 4, lines 21-22, and page 9, lines 10-18).



**Grounds of Rejections to be Reviewed on Appeal**

1. Whether the Appellant's claims 1-19 are patentable under 35 U.S.C. § 102(e) over Keller et al. (US Patent No. 7,023,924, hereinafter "Keller").

1. Whether the Appellant's claims 1, 2, 11 and 12 are patentable under 35 U.S.C. § 102(b) over Krause et al. (US Patent No. 5,949,948, hereinafter "Krause").

2. Pending claims 1-19 and 1, 2, 11 and 12 have been grouped together by the Examiner in their rejection. Appellant urges that each of the rejected claims stands on its own recitation, the claims being considered to be separately patentable for the reasons set forth in more detail *infra*.

## ARGUMENT

I. THE EXAMINER ERRED IN REJECTING CLAIMS 1-19 UNDER 35 U.S.C. § 102 BECAUSE THE CITED REFERENCE FAILS TO ANTICIPATE AT LEAST A METHOD AND SYSTEM FOR PERFORMING A TRICK MODE ON A VIDEO SIGNAL CONTAINING A PLURALITY OF ORIGINAL PICTURES INCLUDING AT LEAST "SEARCHING THE PLURALITY OF ORIGINAL PICTURES IN THE VIDEO SIGNAL FOR A PICTURE COMPATIBLE WITH THE TRICK MODE".

A. 35 U.S.C. § 102(e) - Claim 1

The Examiner rejected the Appellant's claim 1 under 35 U.S.C. § 102(e) as being anticipated by Keller et al. (US Patent No. 7,023,924, hereinafter "Keller"). The rejection is respectfully traversed.

The Examiner alleges that Keller discloses a method of performing a trick mode including all of the aspects of the Appellant's invention. The Appellant respectfully disagrees.

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim" (Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1983)). (emphasis added). The Appellant respectfully submits that Keller absolutely fails to teach each and every element of at least the Appellant's claim 1, which specifically recites:

"A method of performing a trick mode on a video signal containing a plurality of original pictures, comprising the steps of:  
receiving a trick mode command;  
**searching the plurality of original pictures in the video signal for a picture compatible with the trick mode;** and  
initiating the trick mode once the compatible picture is located."  
(emphasis added).

The Appellant's claim 1 finds support throughout the specification. More specifically, Claim 1 is directed to a method of performing a trick mode on a video signal including, after a trick mode is received, **searching** the plurality of original pictures in the video signal for a picture compatible with a received trick mode. The received trick mode is then initiated when the compatible picture is located. More specifically, in support of claim 1, the Appellant in the Specification specifically recites:

“Once the trick mode command is received, at step 214, a search of the plurality of original pictures can be conducted to locate a picture compatible with the trick mode. As shown at step 216, the trick mode can be initiated after the compatible picture is located.

As previously mentioned, a compatible picture is a picture in the video signal that can be used to predict other pictures in the video signal. The compatible picture can be repeatedly displayed for the duration of the freeze trick mode to form a freeze trick mode video signal. In one embodiment of the invention, the compatible picture can be an I picture or a P picture. It is understood, however, that the invention is not limited in this regard, as any other suitable picture can be a compatible picture. By delaying the initiation of the freeze trick mode until a compatible picture is located, such as an I or P picture, it is unnecessary to transmit to a decoder a reference or anchor frame that follows the compatible picture to construct the compatible picture prior to the compatible picture being repeated.” (See Specification, page 10, lines 5-18).

As clearly evident from at least the portion of the Appellant's Specification presented above, in the invention of the Appellant, upon the receipt of a trick mode command, the plurality of original pictures of a video signal are **searched** to locate a picture that is compatible with the received trick mode such that it is unnecessary to transmit to a decoder a reference or anchor frame that follows a picture sent to the decoder after a trick mode command is received. That is, the Appellant teaches that a compatible picture is a picture in the video signal that can be used to predict other pictures in the trick mode video signal and in various embodiments can be an I picture or a P picture. That is, in the invention of the Appellant, when a trick mode, such as a pause or freeze, is requested, a picture compatible with the trick mode video, more specifically, a picture able to predict other pictures in the trick mode video signal to be paused or frozen, is

located. In the invention of the Appellant, initiation of the trick mode display is delayed until the compatible picture is located.

In contrast to the invention of the Appellant, Keller absolutely fails to teach, suggest or anticipate at least “searching the plurality of original pictures in the video signal for a picture compatible with the trick mode” and “initiating the trick mode once the compatible picture is located” as taught in the Appellant’s Specification and claimed by at least the Appellant’s claim 1. More specifically, Keller teaches a method of pausing an MPEG coded video stream. In Keller, to produce a paused MPEG coded video stream from an original MPEG coded video stream, an I frame is extracted from the original stream, and a Group of Pictures for a “pause” (a pause GOP) is constructed containing the extracted I frame, some “frozen” frames, and padding. Each “frozen” frame is a P frame that repeats the I frame. When a pause is requested in the original stream, a seamless transition is made from the I frame to the pause GOP, and the pause GOP is played in a loop until a resume is requested. To resume, the pause GOP is completed and a seamless transition is made to continue in the original stream from the I frame where the pause had begun. (See Keller, Abstract). The Examiner specifically cites col. 38, lines 13-17 and Fig. 33, step 541 of Keller for attempting to teach the technical feature of “searching the plurality of original pictures in the video signal for a picture compatible with the trick mode” of the Appellant’s invention. The Appellant respectfully disagrees.

More specifically, col. 38, lines 13-17 and Fig. 33, step 541 of Keller merely teaches the content of a pause GOP in an elementary stream. That is, col. 38, lines 13-17 and Fig. 33, step 541 of Keller teaches that when a pause command is received, an I frame is extracted from the original stream, and a Group of Pictures for a “pause” (a pause GOP) is constructed containing the extracted I frame, some “frozen” frames which include a P frame that repeats the I frame, and padding. Keller further teaches that to achieve a constant bit rate for the pause, an amount of stuffing is added to the pause GOP. However, there is absolutely no teaching or suggestion in Keller for “**searching** the plurality of original pictures in the video signal for a picture compatible with the trick mode” after receiving a trick mode command as taught in the Appellant’s

Specification and claimed by at least the Appellant's claim 1. That is, Keller absolutely fails to teach or suggest searching the original pictures received for a picture compatible with an initiated trick mode, such a compatible picture being defined as a picture in the video signal that can be used to predict other pictures in the trick mode video signal and in various embodiments can be an I picture or a P picture.

In contrast to the invention of the Applicant, Keller merely teaches extracting an I frame from the original stream, and creating a Group of Pictures for a "pause" (a pause GOP) containing the extracted I frame, some "frozen" frames which include a P frame that repeats the I frame, and padding. That is, in contrast to the invention of the Applicant, **Keller merely teaches extracting an I frame from the original stream, and creating a Group of Pictures for a "pause" (a pause GOP) containing the extracted I frame, some "frozen" frames, which include a P frame that repeats the I frame, and padding. As such, in Keller when a pause is requested in the original stream, a seamless transition is made from the I frame to the pause GOP, and the pause GOP is played in a loop until a resume is requested.** However, there is absolutely no teaching or suggestion in Keller for, after a trick mode command is received, "searching the plurality of original pictures in the video signal for a picture compatible with the trick mode" as taught in the Appellant's Specification and claimed by at least the Appellant's claim 1. That is, in the invention of Keller, an next I frame is automatically extracted from the original picture regardless of whether a P frame can be used as a compatible picture to predict other pictures in the video signal for performing a trick mode such as a pause or freeze command as taught and claimed by the Applicant.

It is apparent from the teachings of Keller, that Keller does not perform a search for a picture **compatible** with a trick mode as taught and claimed by the Applicant. That is, the Applicant teaches that a compatible picture is a picture that can be used to predict other pictures in the video signal to perform the requested trick mode and can be a P or I picture. Instead, Keller merely teaches extracting a next I frame when a pause command is received. Furthermore, Keller does not teach or suggest delaying the trick mode until the compatible picture is found as taught and claimed by the

Applicant. Instead and as defined above, in Keller an I frame is extracted from an original stream, and a Group of Pictures is created for a "pause" (a pause GOP) containing the extracted I frame, some "frozen" frames, which include a P frame that repeats the I frame, and padding. As such, in Keller when a pause is requested in the original stream, a seamless transition is made from the I frame to the pause GOP, and the pause GOP is played in a loop until a resume is requested and a search for a compatible picture as taught and claimed by the Applicant is not performed. Instead, in Keller only a next I frame is considered for performing a pause command regardless of whether a P frame is encountered before the next I frame and the P frame is a compatible picture and can be used to perform the received trick mode as taught and claimed by the Applicant.

Therefore, the Appellant submits that for at least the reasons recited above and as clearly presented above, the teachings of Keller absolutely fail to teach each and every element of the Appellant's claimed invention and at least claim 1, arranged as in the claim as required for anticipation. As such, the Appellant submits that the Appellant's claim 1 is not anticipated by the teachings of Keller and fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

B. 35 U.S.C. § 102(e) - Claim 2

Claim 2 depends directly from independent claim 1 and recites further technical features thereof. At least because the teachings of Keller absolutely fail to teach, suggest or anticipate the invention of the Appellant with regard to at least the Appellant's independent claim 1, the Appellant respectfully submits that dependent claim 2 is also not anticipated and is allowable for at least the reasons stated above with respect to independent claim 1. The Appellant further submits that Keller also fails to teach, suggest or anticipate the Appellant's claim 1 further limited by "wherein the compatible picture is an intra picture" as recited in claim 2.

That is, and for at least the same reasons provided in Section A above, at least because Keller fails to teach, suggest or anticipate at least a method and system for



performing a trick mode on a video signal containing a plurality of original pictures including at least “searching the plurality of original pictures in the video signal for a picture compatible with the trick mode” as taught in the Appellant's Specification and claimed in at least the Appellant's claim 1, the Appellant respectfully submits that Keller also fails to teach, suggest or anticipate the Appellant's invention as claimed in dependent claim 2, which depends directly from independent claim 1.

Therefore, the Appellant submits that claim 2, as it now stands, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

C. 35 U.S.C. § 102(e) - Claim 3

Claim 3 depends directly from independent claim 1 and recites further technical features thereof. At least because the teachings of Keller absolutely fail to teach, suggest or anticipate the invention of the Appellant with regard to at least the Appellant's independent claim 1, the Appellant respectfully submits that dependent claim 3 is also not anticipated and is allowable for at least the reasons stated above with respect to independent claim 1. The Appellant further submits that Keller also fails to teach, suggest or anticipate the Appellant's claim 1 further limited by "wherein the compatible picture is a predictive picture" as recited in claim 3.

That is, and for at least the same reasons provided in Section A above, at least because Keller fails to teach, suggest or anticipate at least a method and system for performing a trick mode on a video signal containing a plurality of original pictures including at least “searching the plurality of original pictures in the video signal for a picture compatible with the trick mode” as taught in the Appellant's Specification and claimed in at least the Appellant's claim 1, the Appellant respectfully submits that Keller also fails to teach, suggest or anticipate the Appellant's invention as claimed in dependent claim 3, which depends directly from independent claim 1.

Therefore, the Appellant submits that claim 3, as it now stands, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

D. 35 U.S.C. § 102(e) - Claim 4

Claim 4 depends directly from independent claim 1 and recites further technical features thereof. At least because the teachings of Keller absolutely fail to teach, suggest or anticipate the invention of the Appellant with regard to at least the Appellant's independent claim 1, the Appellant respectfully submits that dependent claim 4 is also not anticipated and is allowable for at least the reasons stated above with respect to independent claim 1. The Appellant further submits that Keller also fails to teach, suggest or anticipate the Appellant's claim 1 further limited by "wherein the trick mode is a freeze trick mode and said method further comprises the step of repeating the compatible picture for the duration of the trick mode to form a trick mode signal" as recited in claim 4.

That is, and for at least the same reasons provided in Section A above, at least because Keller fails to teach, suggest or anticipate at least a method and system for performing a trick mode on a video signal containing a plurality of original pictures including at least "searching the plurality of original pictures in the video signal for a picture compatible with the trick mode" as taught in the Appellant's Specification and claimed in at least the Appellant's claim 1, the Appellant respectfully submits that Keller also fails to teach, suggest or anticipate the Appellant's invention as claimed in dependent claim 4, which depends directly from independent claim 1.

Therefore, the Appellant submits that claim 4, as it now stands, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

E. 35 U.S.C. § 102(e) - Claim 5

Claim 5 depends directly from dependent claim 4 which depends directly from independent claim 1 and recites further technical features thereof. At least because the teachings of Keller absolutely fail to teach, suggest or anticipate the invention of the Appellant with regard to at least the Appellant's independent claim 1 and dependent claim 4, the Appellant respectfully submits that dependent claim 5 is also not anticipated and is allowable for at least the reasons stated above with respect to



independent claim 1 and dependent claim 4. The Appellant further submits that Keller also fails to teach, suggest or anticipate the Appellant's claim 1 and claim 4 further limited by "wherein said repeating step further comprises the step of repeating the compatible picture for the duration of the trick mode by inserting into the video signal dummy pictures predicted from the compatible picture to form the trick mode video signal" as recited in claim 5.

That is, and for at least the same reasons provided in Section A and Section D above, at least because Keller fails to teach, suggest or anticipate at least a method and system for performing a trick mode on a video signal containing a plurality of original pictures including at least "searching the plurality of original pictures in the video signal for a picture compatible with the trick mode" as taught in the Appellant's Specification and claimed in at least the Appellant's claim 1 and claim 4, the Appellant respectfully submits that Keller also fails to teach, suggest or anticipate the Appellant's invention as claimed in dependent claim 5, which depends directly from dependent claim 4 and indirectly from independent claim 1.

Therefore, the Appellant submits that claim 5, as it now stands, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

F. 35 U.S.C. § 102(e) - Claim 6

Claim 6 depends directly from claim 5 which depends directly from dependent claim 4 which depends directly from independent claim 1 and recites further technical features thereof. At least because the teachings of Keller absolutely fail to teach, suggest or anticipate the invention of the Appellant with regard to at least the Appellant's independent claim 1 and dependent claims 4 and 5, the Appellant respectfully submits that dependent claim 6 is also not anticipated and is allowable for at least the reasons stated above with respect to independent claim 1 and dependent claims 4 and 5. The Appellant further submits that Keller also fails to teach, suggest or anticipate the Appellant's claims 1, 4 and 5 further limited by "wherein each of the plurality of original pictures contains a display indicator and said method further

comprises the step of selectively modifying the display indicator of the original pictures that follow the compatible picture when a dummy picture is inserted into the video signal" as recited in claim 6.

That is, and for at least the same reasons provided in Sections A, D and E above, at least because Keller fails to teach, suggest or anticipate at least a method and system for performing a trick mode on a video signal containing a plurality of original pictures including at least "searching the plurality of original pictures in the video signal for a picture compatible with the trick mode" as taught in the Appellant's Specification and claimed in at least the Appellant's claims 1, 4 and 5, the Appellant respectfully submits that Keller also fails to teach, suggest or anticipate the Appellant's invention as claimed in dependent claim 6, which depends directly from dependent claim 5 and indirectly from claims 1 and 4.

Therefore, the Appellant submits that claim 6, as it now stands, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

G. 35 U.S.C. § 102(e) - Claim 7

Claim 7 depends directly from claim 6 which depends directly from claim 5 which depends directly from dependent claim 4 which depends directly from independent claim 1 and recites further technical features thereof. At least because the teachings of Keller absolutely fail to teach, suggest or anticipate the invention of the Appellant with regard to at least the Appellant's independent claim 1 and dependent claims 4, 5 and 6, the Appellant respectfully submits that dependent claim 7 is also not anticipated and is allowable for at least the reasons stated above with respect to independent claim 1 and dependent claims 4, 5 and 6. The Appellant further submits that Keller also fails to teach, suggest or anticipate the Appellant's claims 1, 4, 5 and 6 further limited by "wherein the dummy pictures are dummy predictive pictures" as recited in claim 7.

That is, and for at least the same reasons provided in Sections A, D, E and F above, at least because Keller fails to teach, suggest or anticipate at least a method

and system for performing a trick mode on a video signal containing a plurality of original pictures including at least “searching the plurality of original pictures in the video signal for a picture compatible with the trick mode” as taught in the Appellant's Specification and claimed in at least the Appellant's claims 1, 4, 5 and 6, the Appellant respectfully submits that Keller also fails to teach, suggest or anticipate the Appellant's invention as claimed in dependent claim 7, which depends directly from dependent claim 6 and indirectly from claims 1, 4 and 5.

Therefore, the Appellant submits that claim 7, as it now stands, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

H. 35 U.S.C. § 102(e) - Claim 8

Claim 8 depends directly from claim 7 which depends directly from claim 6 which depends directly from claim 5 which depends directly from dependent claim 4 which depends directly from independent claim 1 and recites further technical features thereof. At least because the teachings of Keller absolutely fail to teach, suggest or anticipate the invention of the Appellant with regard to at least the Appellant's independent claim 1 and dependent claims 4-7, the Appellant respectfully submits that dependent claim 8 is also not anticipated and is allowable for at least the reasons stated above with respect to independent claim 1 and dependent claims 4-7. The Appellant further submits that Keller also fails to teach, suggest or anticipate the Appellant's claims 1, 4, 5, 6 and 7 further limited by "wherein the compatible picture is an intra (I) picture and said method further comprises the step of selectively inserting the compatible I picture into the trick mode signal" as recited in claim 8.

That is, and for at least the same reasons provided in Sections A, D, E, F and G above, at least because Keller fails to teach, suggest or anticipate at least a method and system for performing a trick mode on a video signal containing a plurality of original pictures including at least “searching the plurality of original pictures in the video signal for a picture compatible with the trick mode” as taught in the Appellant's Specification and claimed in at least the Appellant's claims 1 and 4-7, the Appellant

respectfully submits that Keller also fails to teach, suggest or anticipate the Appellant's invention as claimed in dependent claim 8, which depends directly from dependent claim 7 and indirectly from claims 1, 4, 5 and 6.

Therefore, the Appellant submits that claim 8, as it now stands, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

I. 35 U.S.C. § 102(e) - Claim 9

Claim 9 depends directly from claim 8 which depends directly from claim 7 which depends directly from claim 6 which depends directly from claim 5 which depends directly from dependent claim 4 which depends directly from independent claim 1 and recites further technical features thereof. At least because the teachings of Keller absolutely fail to teach, suggest or anticipate the invention of the Appellant with regard to at least the Appellant's independent claim 1 and dependent claims 4-8, the Appellant respectfully submits that dependent claim 9 is also not anticipated and is allowable for at least the reasons stated above with respect to independent claim 1 and dependent claims 4-8. The Appellant further submits that Keller also fails to teach, suggest or anticipate the Appellant's claims 1, 4, 5, 6, 7 and 8 further limited by "wherein at least a portion of the trick mode is decoded by a remote decoder" as recited in claim 9.

That is, and for at least the same reasons provided in Sections A, D, E, F, G and H above, at least because Keller fails to teach, suggest or anticipate at least a method and system for performing a trick mode on a video signal containing a plurality of original pictures including at least "searching the plurality of original pictures in the video signal for a picture compatible with the trick mode" as taught in the Appellant's Specification and claimed in at least the Appellant's claims 1 and 4-8, the Appellant respectfully submits that Keller also fails to teach, suggest or anticipate the Appellant's invention as claimed in dependent claim 9, which depends directly from dependent claim 8 and indirectly from claims 1, 4, 5, 6 and 7.

Therefore, the Appellant submits that claim 9, as it now stands, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

J. 35 U.S.C. § 102(e) - Claim 10

Claim 10 is an independent claim that recites similar relevant features as recited in the Appellant's independent claim 1. More specifically, claim 10 claims a method for performing a trick mode on a video signal containing a plurality of original pictures including "receiving a trick mode command", "searching for a picture in the video signal compatible with the trick mode" and "initiating the trick mode once the compatible picture is located".

As described in Section A above, at least because Keller fails to teach, suggest or anticipate at least a method and system for performing a trick mode on a video signal containing a plurality of original pictures including at least "searching the plurality of original pictures in the video signal for a picture compatible with the trick mode" as taught in the Appellant's Specification and claimed in at least the Appellant's claim 1 and as similarly claimed in the Appellant's independent claim 10, the Appellant respectfully submits that Keller also fails to teach, suggest or anticipate the Appellant's invention as claimed in independent claim 10, which recites similar relevant features as recited in independent claim 1.

Therefore, the Appellant submits that claim 10, as it now stands, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

K. 35 U.S.C. § 102(e) - Claim 11

Claim 11 is an independent claim that recites similar relevant features as recited in the Appellant's independent claim 1 and independent claim 10. More specifically, claim 11 claims a system for performing a trick mode on a video signal containing a plurality of original pictures including a video processor programmed to "receive a trick mode command", "search the plurality of original pictures for a picture in the video signal compatible with the trick mode" and "initiate the trick mode once the compatible picture is located".

As described in Sections A and J above, Keller fails to teach, suggest or anticipate at least a method and system for performing a trick mode on a video signal containing a plurality of original pictures including at least "searching the plurality of original pictures in the video signal for a picture compatible with the trick mode" as taught in the Appellant's Specification and claimed in at least the Appellant's claim 1. As such, the Appellant submits that Keller also fails to teach, suggest or anticipate the Appellant's claim 11, which recites similar relevant features as recited in independent claim 1.

Therefore, the Appellant submits that claim 11, as it now stands, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

L. 35 U.S.C. § 102(e) - Claim 12

Claim 12 depends directly from independent claim 11 and recites further technical features thereof. At least because the teachings of Keller absolutely fail to teach, suggest or anticipate the invention of the Appellant with regard to at least the Appellant's independent claim 11, the Appellant respectfully submits that dependent claim 12 is also not anticipated and is allowable for at least the reasons stated above with respect to independent claim 1. The Appellant further submits that Keller also fails to teach, suggest or anticipate the Appellant's claim 11 further limited by "wherein the compatible picture is an intra picture" as recited in claim 12.

That is, and for at least the same reasons provided in Section K above, at least because Keller fails to teach, suggest or anticipate at least a method and system for performing a trick mode on a video signal containing a plurality of original pictures including at least "searching the plurality of original pictures in the video signal for a picture compatible with the trick mode" as taught in the Appellant's Specification and claimed in at least the Appellant's claim 11, the Appellant respectfully submits that Keller also fails to teach, suggest or anticipate the Appellant's invention as claimed in dependent claim 12, which depends directly from independent claim 11.



Therefore, the Appellant submits that claim 12, as it now stands, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

M. 35 U.S.C. § 102(e) - Claim 13

Claim 13 depends directly from independent claim 11 and recites further technical features thereof. At least because the teachings of Keller absolutely fail to teach, suggest or anticipate the invention of the Appellant with regard to at least the Appellant's independent claim 11, the Appellant respectfully submits that dependent claim 13 is also not anticipated and is allowable for at least the reasons stated above with respect to independent claim 11. The Appellant further submits that Keller also fails to teach, suggest or anticipate the Appellant's claim 11 further limited by "wherein the compatible picture is a predictive picture" as recited in claim 13.

That is, and for at least the same reasons provided in Section K above, at least because Keller fails to teach, suggest or anticipate at least a method and system for performing a trick mode on a video signal containing a plurality of original pictures including at least "searching the plurality of original pictures in the video signal for a picture compatible with the trick mode" as taught in the Appellant's Specification and claimed in at least the Appellant's claim 11, the Appellant respectfully submits that Keller also fails to teach, suggest or anticipate the Appellant's invention as claimed in dependent claim 13, which depends directly from independent claim 11.

Therefore, the Appellant submits that claim 13, as it now stands, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

N. 35 U.S.C. § 102(e) - Claim 14

Claim 14 depends directly from independent claim 11 and recites further technical features thereof. At least because the teachings of Keller absolutely fail to teach, suggest or anticipate the invention of the Appellant with regard to at least the Appellant's independent claim 11, the Appellant respectfully submits that dependent claim 14 is also not anticipated and is allowable for at least the reasons stated above

with respect to independent claim 11. The Appellant further submits that Keller also fails to teach, suggest or anticipate the Appellant's claim 11 further limited by "wherein the trick mode is a freeze trick mode and the processor is further programmed to repeat the compatible picture for the duration of the trick mode to form a trick mode signal" as recited in claim 14.

That is, and for at least the same reasons provided in Section K above, at least because Keller fails to teach, suggest or anticipate at least a method and system for performing a trick mode on a video signal containing a plurality of original pictures including at least "searching the plurality of original pictures in the video signal for a picture compatible with the trick mode" as taught in the Appellant's Specification and claimed in at least the Appellant's claim 11, the Appellant respectfully submits that Keller also fails to teach, suggest or anticipate the Appellant's invention as claimed in dependent claim 14, which depends directly from independent claim 11.

Therefore, the Appellant submits that claim 14, as it now stands, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

O. 35 U.S.C. § 102(e) - Claim 15

Claim 15 depends directly from dependent claim 14 which depends directly from independent claim 11 and recites further technical features thereof. At least because the teachings of Keller absolutely fail to teach, suggest or anticipate the invention of the Appellant with regard to at least the Appellant's independent claim 11 and dependent claim 14, the Appellant respectfully submits that dependent claim 15 is also not anticipated and is allowable for at least the reasons stated above with respect to independent claim 11 and dependent claim 14. The Appellant further submits that Keller also fails to teach, suggest or anticipate the Appellant's claim 11 and claim 14 further limited by "wherein the processor is further programmed to repeat the compatible picture for the duration of the trick mode by inserting into the video signal dummy pictures predicted from the compatible picture to form the trick mode video signal" as recited in claim 15.



That is, and for at least the same reasons provided in Section K and Section N above, at least because Keller fails to teach, suggest or anticipate at least a method and system for performing a trick mode on a video signal containing a plurality of original pictures including at least "searching the plurality of original pictures in the video signal for a picture compatible with the trick mode" as taught in the Appellant's Specification and claimed in at least the Appellant's claim 11 and claim 14, the Appellant respectfully submits that Keller also fails to teach, suggest or anticipate the Appellant's invention as claimed in dependent claim 15, which depends directly from dependent claim 14 and indirectly from independent claim 11.

Therefore, the Appellant submits that claim 15, as it now stands, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

P. 35 U.S.C. § 102(e) - Claim 16

Claim 16 depends directly from claim 15 which depends directly from dependent claim 14 which depends directly from independent claim 11 and recites further technical features thereof. At least because the teachings of Keller absolutely fail to teach, suggest or anticipate the invention of the Appellant with regard to at least the Appellant's independent claim 11 and dependent claims 14 and 15, the Appellant respectfully submits that dependent claim 16 is also not anticipated and is allowable for at least the reasons stated above with respect to independent claim 11 and dependent claims 14 and 15. The Appellant further submits that Keller also fails to teach, suggest or anticipate the Appellant's claims 11, 14 and 15 further limited by "wherein each of the plurality of original pictures contains a display indicator and the processor is further programmed to selectively modify the display indicator of the original pictures that follow the compatible picture when a dummy picture is inserted into the video signal" as recited in claim 16.

That is, and for at least the same reasons provided in Sections K, N and O above, at least because Keller fails to teach, suggest or anticipate at least a method and system for performing a trick mode on a video signal containing a plurality of

original pictures including at least "searching the plurality of original pictures in the video signal for a picture compatible with the trick mode" as taught in the Appellant's Specification and claimed in at least the Appellant's claims 11, 14 and 15, the Appellant respectfully submits that Keller also fails to teach, suggest or anticipate the Appellant's invention as claimed in dependent claim 16, which depends directly from dependent claim 15 and indirectly from claims 11 and 14.

Therefore, the Appellant submits that claim 16, as it now stands, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

Q. 35 U.S.C. § 102(e) - Claim 17

Claim 17 depends directly from claim 16 which depends directly from claim 15 which depends directly from dependent claim 14 which depends directly from independent claim 11 and recites further technical features thereof. At least because the teachings of Keller absolutely fail to teach, suggest or anticipate the invention of the Appellant with regard to at least the Appellant's independent claim 11 and dependent claims 14, 15 and 16, the Appellant respectfully submits that dependent claim 17 is also not anticipated and is allowable for at least the reasons stated above with respect to independent claim 11 and dependent claims 14, 15 and 16. The Appellant further submits that Keller also fails to teach, suggest or anticipate the Appellant's claims 11, 14, 15 and 16 further limited by "wherein the dummy pictures are dummy predictive pictures" as recited in claim 17.

That is, and for at least the same reasons provided in Sections K, N, O and P above, at least because Keller fails to teach, suggest or anticipate at least a method and system for performing a trick mode on a video signal containing a plurality of original pictures including at least "searching the plurality of original pictures in the video signal for a picture compatible with the trick mode" as taught in the Appellant's Specification and claimed in at least the Appellant's claims 11, 14, 15 and 16, the Appellant respectfully submits that Keller also fails to teach, suggest or anticipate the

Appellant's invention as claimed in dependent claim 17, which depends directly from dependent claim 16 and indirectly from claims 11, 14 and 15.

Therefore, the Appellant submits that claim 17, as it now stands, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

R. 35 U.S.C. § 102(e) - Claim 18

Claim 18 depends directly from claim 17 which depends directly from claim 16 which depends directly from claim 15 which depends directly from dependent claim 14 which depends directly from independent claim 11 and recites further technical features thereof. At least because the teachings of Keller absolutely fail to teach, suggest or anticipate the invention of the Appellant with regard to at least the Appellant's independent claim 11 and dependent claims 14-17, the Appellant respectfully submits that dependent claim 18 is also not anticipated and is allowable for at least the reasons stated above with respect to independent claim 11 and dependent claims 14-17. The Appellant further submits that Keller also fails to teach, suggest or anticipate the Appellant's claims 11, 14, 15, 16 and 17 further limited by "wherein the compatible picture is an intra (I) picture and the processor is further programmed to selectively insert the compatible I picture into the trick mode signal" as recited in claim 18.

That is, and for at least the same reasons provided in Sections K, N, O, P and Q above, at least because Keller fails to teach, suggest or anticipate at least a method and system for performing a trick mode on a video signal containing a plurality of original pictures including at least "searching the plurality of original pictures in the video signal for a picture compatible with the trick mode" as taught in the Appellant's Specification and claimed in at least the Appellant's claims 11 and 14-17, the Appellant respectfully submits that Keller also fails to teach, suggest or anticipate the Appellant's invention as claimed in dependent claim 18, which depends directly from dependent claim 17 and indirectly from claims 11, 14, 15 and 16.

Therefore, the Appellant submits that claim 18, as it now stands, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

S. 35 U.S.C. § 102(e) - Claim 19

Claim 19 depends directly from claim 18 which depends directly from claim 17 which depends directly from claim 16 which depends directly from claim 15 which depends directly from dependent claim 14 which depends directly from independent claim 11 and recites further technical features thereof. At least because the teachings of Keller absolutely fail to teach, suggest or anticipate the invention of the Appellant with regard to at least the Appellant's independent claim 11 and dependent claims 14-18, the Appellant respectfully submits that dependent claim 19 is also not anticipated and is allowable for at least the reasons stated above with respect to independent claim 11 and dependent claims 14-18. The Appellant further submits that Keller also fails to teach, suggest or anticipate the Appellant's claims 11, 14, 15, 16, 17 and 18 further limited by "further comprising a remote decoder for decoding at least a portion of the trick mode video signal" as recited in claim 19.

That is, and for at least the same reasons provided in Sections K, N, O, P, Q and R above, at least because Keller fails to teach, suggest or anticipate at least a method and system for performing a trick mode on a video signal containing a plurality of original pictures including at least "searching the plurality of original pictures in the video signal for a picture compatible with the trick mode" as taught in the Appellant's Specification and claimed in at least the Appellant's claims 11 and 14-18, the Appellant respectfully submits that Keller also fails to teach, suggest or anticipate the Appellant's invention as claimed in dependent claim 19, which depends directly from dependent claim 18 and indirectly from claims 11, 14, 15, 16 and 17.

Therefore, the Appellant submits that claim 19, as it now stands, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

**II. THE EXAMINER ERRED IN REJECTING CLAIMS 1, 2, 11 AND 12 UNDER 35 U.S.C. § 102 BECAUSE THE CITED REFERENCE FAILS TO ANTICIPATE AT LEAST A METHOD AND SYSTEM FOR PERFORMING A TRICK MODE ON A VIDEO SIGNAL CONTAINING A PLURALITY OF ORIGINAL PICTURES INCLUDING AT LEAST "SEARCHING THE PLURALITY OF ORIGINAL PICTURES IN THE VIDEO SIGNAL FOR A PICTURE COMPATIBLE WITH THE TRICK MODE".**

A. 35 U.S.C. § 102(b) - Claim 1

The Examiner rejected the Appellant's claim 1 under 35 U.S.C. § 102(b) as being anticipated by Krause et al. (US Patent No. 5,949,948, hereinafter "Krause"). The rejection is respectfully traversed.

The Examiner alleges that Krause discloses a method of performing a trick mode including all of the aspects of the Appellant's invention. The Appellant respectfully disagrees.

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim" (Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1983)). (emphasis added). The Appellant respectfully submits that Krause absolutely fails to teach each and every element of at least the Appellant's claim 1, which specifically recites:

"A method of performing a trick mode on a video signal containing a plurality of original pictures, comprising the steps of:  
receiving a trick mode command;  
**searching the plurality of original pictures in the video signal for a picture compatible with the trick mode;** and  
initiating the trick mode once the compatible picture is located."  
(emphasis added).

The Appellant's claim 1 finds support throughout the specification. More specifically, Claim 1 is directed to a method of performing a trick mode on a video signal including, after a trick mode is received, **searching** the plurality of original pictures in the video

signal for a picture compatible with a received trick mode. The received trick mode is then initiated when the compatible picture is located. More specifically, in support of claim 1, the Appellant in the Specification specifically recites:

“Once the trick mode command is received, at step 214, a search of the plurality of original pictures can be conducted to locate a picture compatible with the trick mode. As shown at step 216, the trick mode can be initiated after the compatible picture is located.

As previously mentioned, a compatible picture is a picture in the video signal that can be used to predict other pictures in the video signal. The compatible picture can be repeatedly displayed for the duration of the freeze trick mode to form a freeze trick mode video signal. In one embodiment of the invention, the compatible picture can be an I picture or a P picture. It is understood, however, that the invention is not limited in this regard, as any other suitable picture can be a compatible picture. By delaying the initiation of the freeze trick mode until a compatible picture is located, such as an I or P picture, it is unnecessary to transmit to a decoder a reference or anchor frame that follows the compatible picture to construct the compatible picture prior to the compatible picture being repeated.” (See Specification, page 10, lines 5-18).

As clearly evident from at least the portion of the Appellant's Specification presented above, in the invention of the Appellant, upon the receipt of a trick mode command, the plurality of original pictures of a video signal are **searched** to locate a picture that is compatible with the received trick mode such that it is unnecessary to transmit to a decoder a reference or anchor frame that follows a picture sent to the decoder after a trick mode command is received. That is, the Appellant teaches that a compatible picture is a picture in the video signal that can be used to predict other pictures in the trick mode video signal and in various embodiments can be an I picture or a P picture. That is, in the invention of the Appellant, when a trick mode, such as a pause or freeze, is requested, a picture compatible with the trick mode video, more specifically, a picture able to predict other pictures in the trick mode video signal to be paused or frozen, is located. In the invention of the Appellant, initiation of the trick mode display is delayed until the compatible picture is located.

In contrast to the invention of the Appellant, Krause absolutely fails to teach, suggest or anticipate at least “searching the plurality of original pictures in the video signal for a picture compatible with the trick mode” and “initiating the trick mode once



the compatible picture is located” as taught in the Appellant’s Specification and claimed by at least the Appellant’s claim 1. More specifically, Krause teaches a method and apparatus for implementing playback features for compressed video data. In Krause, a compressed video playback system eliminates playback mode transition artifacts. The Examiner specifically cites col. 7, line 47 through col. 8, line 63 of Krause for attempting to teach the technical feature of “searching the plurality of original pictures in the video signal for a picture compatible with the trick mode” of the Appellant’s invention. The Appellant respectfully disagrees.

More specifically, col. 7, line 47 through col. 8, line 63 of Krause teaches a method of frame selection during transitions that insures that a decoder only receives frames that can be properly decoded during the transition period from one mode of play to another. That is, in Krause upon receiving a command to transition to a different playback mode, a controller refers to a stored Table for determining the types of frames that are needed for the specified playback mode.

However, there is absolutely no teaching or suggestion in Krause for “**searching** the plurality of original pictures in the video signal for a picture compatible with the trick mode” after receiving a trick mode command as taught in the Appellant’s Specification and claimed by at least the Appellant’s claim 1. That is, Krause absolutely fails to teach or suggest searching the original pictures received for a picture compatible with an initiated trick mode, such a compatible picture being defined as a picture in the video signal that can be used to predict other pictures in the trick mode video signal and in various embodiments can be an I picture or a P picture.

In contrast to the invention of the Applicant, Krause merely teaches referring to a stored Table to determine **what type of frames** are needed for a specified playback mode and not “**searching** the plurality of original pictures in the video signal **for a picture compatible with the trick mode**” after receiving a trick mode command as taught in the Appellant’s Specification and claimed by at least the Appellant’s claim 1. That is, Krause does not teach searching the original picture for a compatible picture to perform a trick mode but instead teaches referring to a store table to determine **what type of frames** are needed for a specified playback mode. The invention of Krause

does not search for a specific next compatible picture as taught and claimed by the Applicant but identifies using a stored Table, a type of pictures to be used for preventing artifacts during transitions between playback modes.

Therefore, the Appellant submits that for at least the reasons recited above and as clearly presented above, the teachings of Krause absolutely fail to teach each and every element of the Appellant's claimed invention and at least claim 1, arranged as in the claim as required for anticipation. As such, the Appellant submits that the Appellant's claim 1 is not anticipated by the teachings of Krause and fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

B. 35 U.S.C. § 102(b) - Claim 2

Claim 2 depends directly from independent claim 1 and recites further technical features thereof. At least because the teachings of Krause absolutely fail to teach, suggest or anticipate the invention of the Appellant with regard to at least the Appellant's independent claim 1, the Appellant respectfully submits that dependent claim 2 is also not anticipated and is allowable for at least the reasons stated above with respect to independent claim 1. The Appellant further submits that Krause also fails to teach, suggest or anticipate the Appellant's claim 1 further limited by "wherein the compatible picture is an intra picture" as recited in claim 2.

That is, and for at least the same reasons provided in Section A above, at least because Krause fails to teach, suggest or anticipate at least a method and system for performing a trick mode on a video signal containing a plurality of original pictures including at least "searching the plurality of original pictures in the video signal for a picture compatible with the trick mode" as taught in the Appellant's Specification and claimed in at least the Appellant's claim 1, the Appellant respectfully submits that Krause also fails to teach, suggest or anticipate the Appellant's invention as claimed in dependent claim 2, which depends directly from independent claim 1.

Therefore, the Appellant submits that claim 2, as it now stands, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.



C. 35 U.S.C. § 102(b) - Claim 11

Claim 11 is an independent claim that recites similar relevant features as recited in the Appellant's independent claim 1. More specifically, claim 11 claims a system for performing a trick mode on a video signal containing a plurality of original pictures including a video processor programmed to "receive a trick mode command", "search the plurality of original pictures for a picture in the video signal compatible with the trick mode" and "initiate the trick mode once the compatible picture is located".

As described in Section A above, Krause fails to teach, suggest or anticipate at least a method and system for performing a trick mode on a video signal containing a plurality of original pictures including at least "searching the plurality of original pictures in the video signal for a picture compatible with the trick mode" as taught in the Appellant's Specification and claimed in at least the Appellant's claim 1. As such, the Appellant submits that Krause also fails to teach, suggest or anticipate the Appellant's claim 11, which recites similar relevant features as recited in independent claim 1.

Therefore, the Appellant submits that claim 11, as it now stands, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

D. 35 U.S.C. § 102(b) - Claim 12

Claim 12 depends directly from independent claim 11 and recites further technical features thereof. At least because the teachings of Krause absolutely fail to teach, suggest or anticipate the invention of the Appellant with regard to at least the Appellant's independent claim 11, the Appellant respectfully submits that dependent claim 12 is also not anticipated and is allowable for at least the reasons stated above with respect to independent claim 1. The Appellant further submits that Krause also fails to teach, suggest or anticipate the Appellant's claim 11 further limited by "wherein the compatible picture is an intra picture" as recited in claim 12.

That is, and for at least the same reasons provided in Section C above, at least because Krause fails to teach, suggest or anticipate at least a method and system for

performing a trick mode on a video signal containing a plurality of original pictures including at least “searching the plurality of original pictures in the video signal for a picture compatible with the trick mode” as taught in the Appellant's Specification and claimed in at least the Appellant's claim 11, the Appellant respectfully submits that Krause also fails to teach, suggest or anticipate the Appellant's invention as claimed in dependent claim 12, which depends directly from independent claim 11.

Therefore, the Appellant submits that claim 12, as it now stands, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

### Conclusion

Thus, the Appellant submits that none of the claims presently in the application are anticipated under the provisions of 35 U.S.C. § 102. Consequently, the Appellant believes all these claims are presently in condition for allowance.

For at least the reasons advanced above, the Appellant respectfully urges that the rejections of claims 1-19 as being anticipated under 35 U.S.C. §102 are improper. Reversal of the rejections in this Appeal is respectfully requested.

No fee is believed due. However, if a fee is due, please charge the additional fee to Deposit Account No. 07-0832.

Respectfully submitted,

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Date

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## CLAIMS APPENDIX

1. (Original) A method of performing a trick mode on a video signal containing a plurality of original pictures, comprising the steps of:
  - receiving a trick mode command;
  - searching the plurality of original pictures in the video signal for a picture compatible with the trick mode; and
  - initiating the trick mode once the compatible picture is located.
2. (Original) The method according to claim 1, wherein the compatible picture is an intra picture.
3. (Original) The method according to claim 1, wherein the compatible picture is a predictive picture.
4. (Original) The method according to claim 1, wherein the trick mode is a freeze trick mode and said method further comprises the step of repeating the compatible picture for the duration of the trick mode to form a trick mode signal.
5. (Original) The method according to claim 4, wherein said repeating step further comprises the step of repeating the compatible picture for the duration of the trick mode by inserting into the video signal dummy pictures predicted from the compatible picture to form the trick mode video signal.
6. (Original) The method according to claim 5, wherein each of the plurality of original pictures contains a display indicator and said method further comprises the step of selectively modifying the display indicator of the original pictures that follow the compatible picture when a dummy picture is inserted into the video signal.

7. (Original) The method according to claim 6, wherein the dummy pictures are dummy predictive pictures.

8. (Previously Presented) The method according to claim 7, wherein the compatible picture is an intra (I) picture and said method further comprises the step of selectively inserting the compatible I picture into the trick mode signal.

9. (Original) The method according to claim 8, wherein at least a portion of the trick mode is decoded by a remote decoder.

10. (Original) A method of performing a trick mode on a video signal, comprising the steps of:

- receiving a trick mode command;
- searching for a picture in the video signal compatible with the trick mode; and
- initiating the trick mode once the compatible picture is located;

wherein the trick mode command is a freeze trick mode.

11. (Original) A system for performing a trick mode on a video signal containing a plurality of original pictures, comprising:

a controller for reading data from a storage medium and generating the video signal; and

- a video processor, wherein the processor is programmed to:
  - receive a trick mode command;
  - search the plurality of original pictures for a picture in the video signal compatible with the trick mode; and
  - initiate the trick mode once the compatible picture is located.

12. (Original) The system according to claim 11, wherein the compatible picture is an intra picture.

13. (Original) The system according to claim 11, wherein the compatible picture is a predictive picture.

14. (Original) The system according to claim 11, wherein the trick mode is a freeze trick mode and the processor is further programmed to repeat the compatible picture for the duration of the trick mode to form a trick mode signal.

15. (Original) The system according to claim 14, wherein the processor is further programmed to repeat the compatible picture for the duration of the trick mode by inserting into the video signal dummy pictures predicted from the compatible picture to form the trick mode video signal.

16. (Original) The system according to claim 15, wherein each of the plurality of original pictures contains a display indicator and the processor is further programmed to selectively modify the display indicator of the original pictures that follow the compatible picture when a dummy picture is inserted into the video signal.

17. (Original) The system according to claim 16, wherein the dummy pictures are dummy predictive pictures.

18. (Previously Presented) The system according to claim 17, wherein the compatible picture is an intra (I) picture and the processor is further programmed to selectively insert the compatible I picture into the trick mode signal.

19. (Original) The system according to claim 18, further comprising a remote decoder for decoding at least a portion of the trick mode video signal.

## **EVIDENCE APPENDIX**

Appellant asserts that there is no evidence to be submitted in accordance with this section.



**RELATED PROCEEDINGS APPENDIX**

Appellant asserts that there are no copies of decisions to be submitted in accordance with this section.